

No. 705,465.

Patented July 22, 1902.

E. W. SPENCER.
LOG RELEASING DEVICE FOR SCOWS.

(Application filed Feb. 24, 1902.)

(No Model.)

Fig. 1.

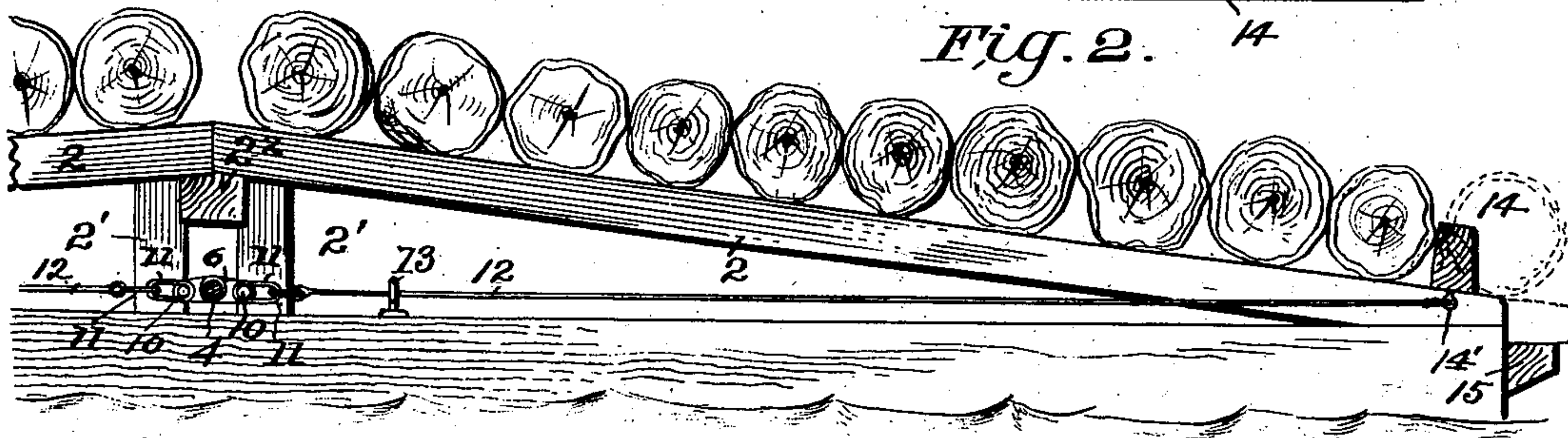
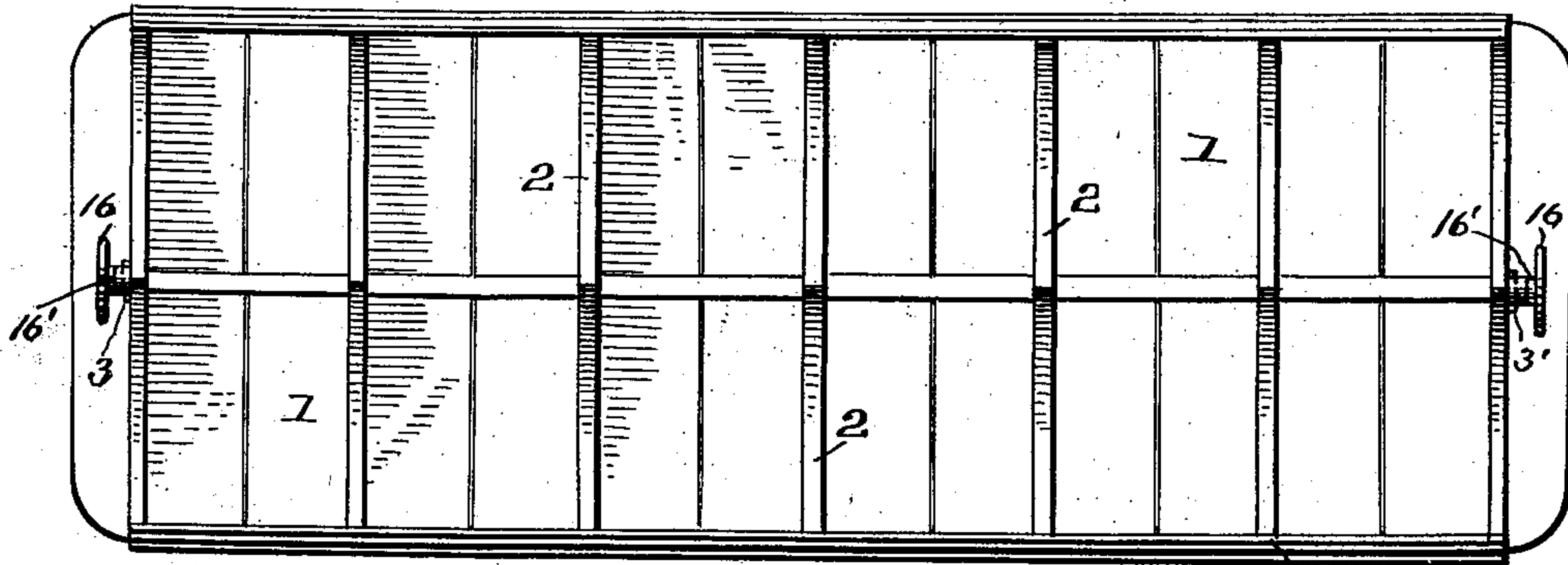


Fig. 3.

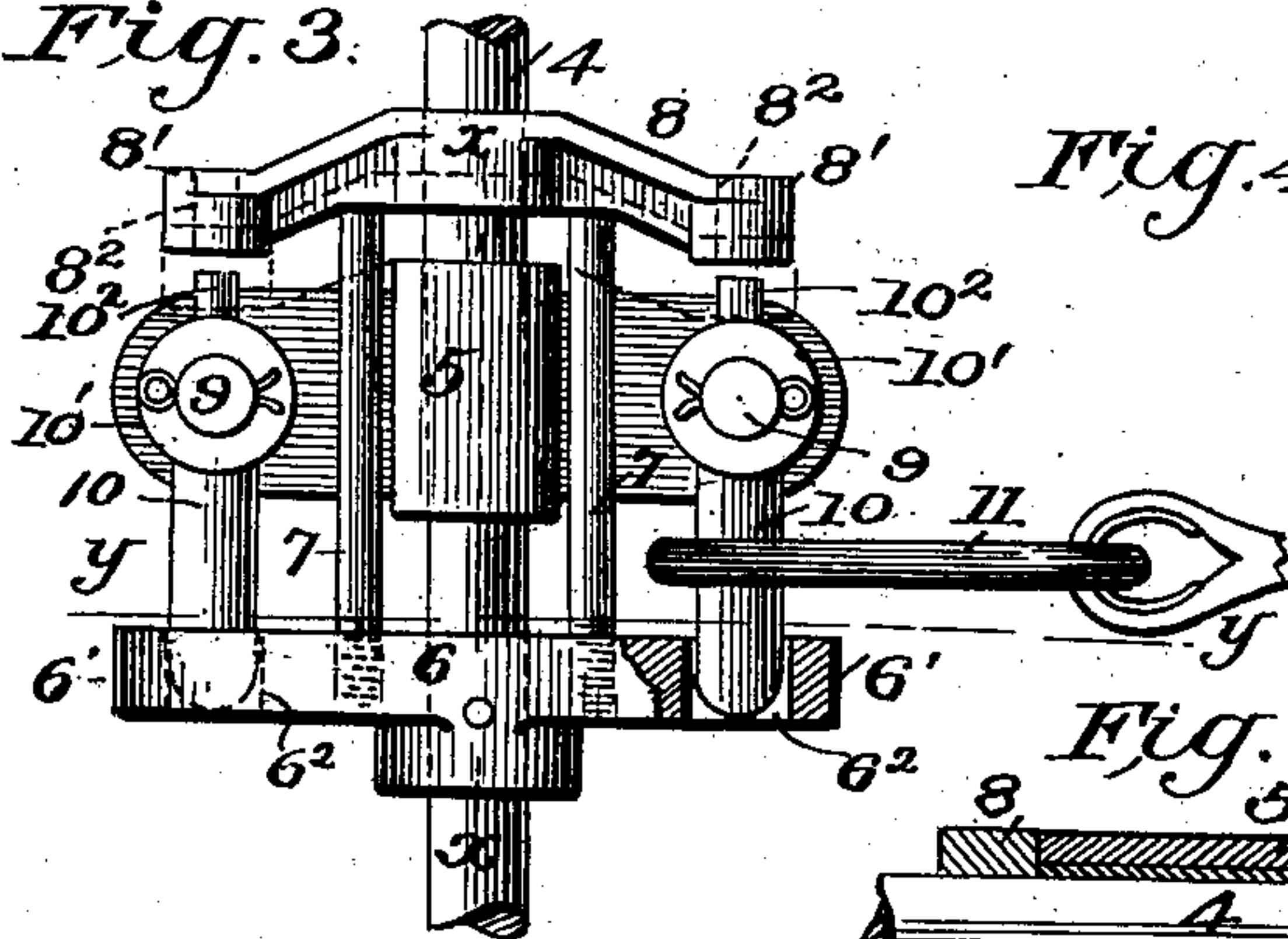


Fig. 4.

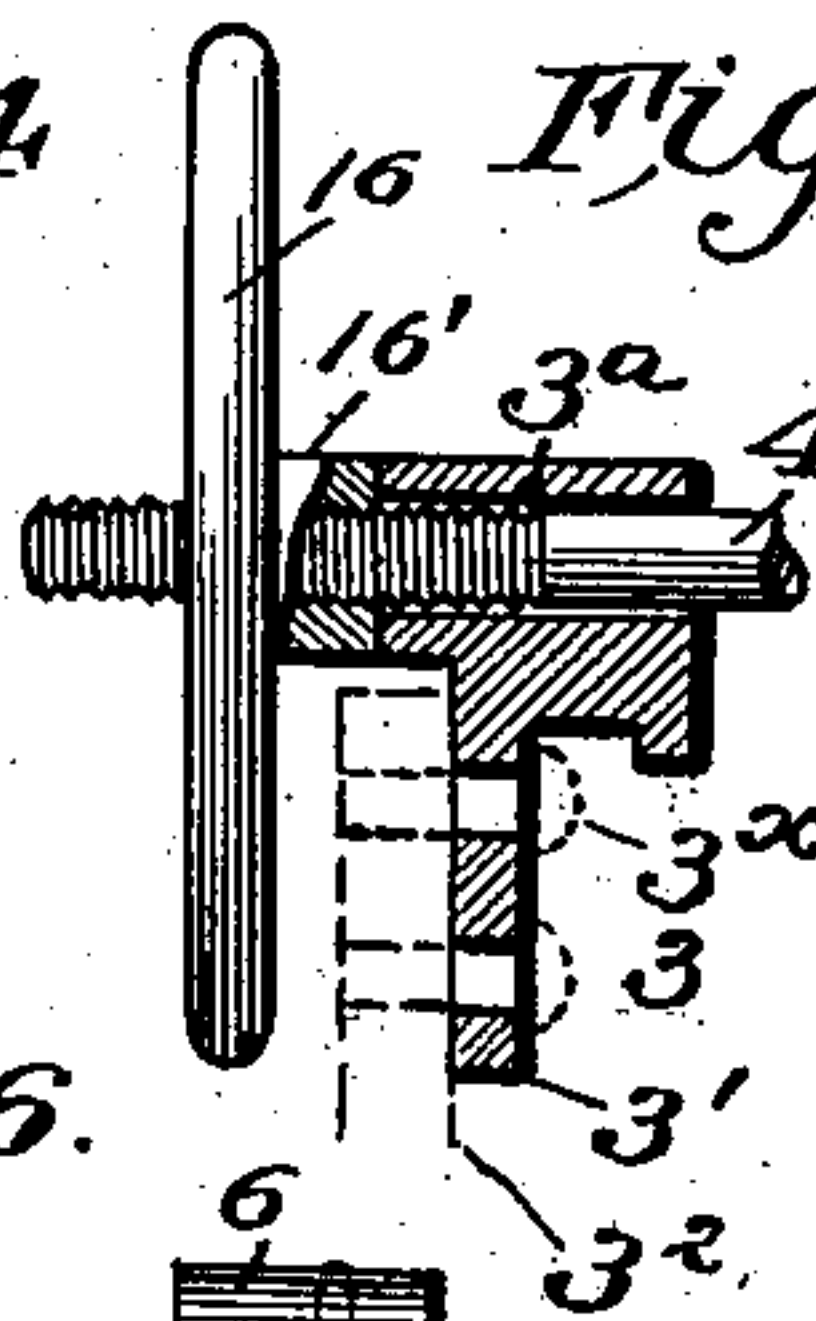


Fig. 5.

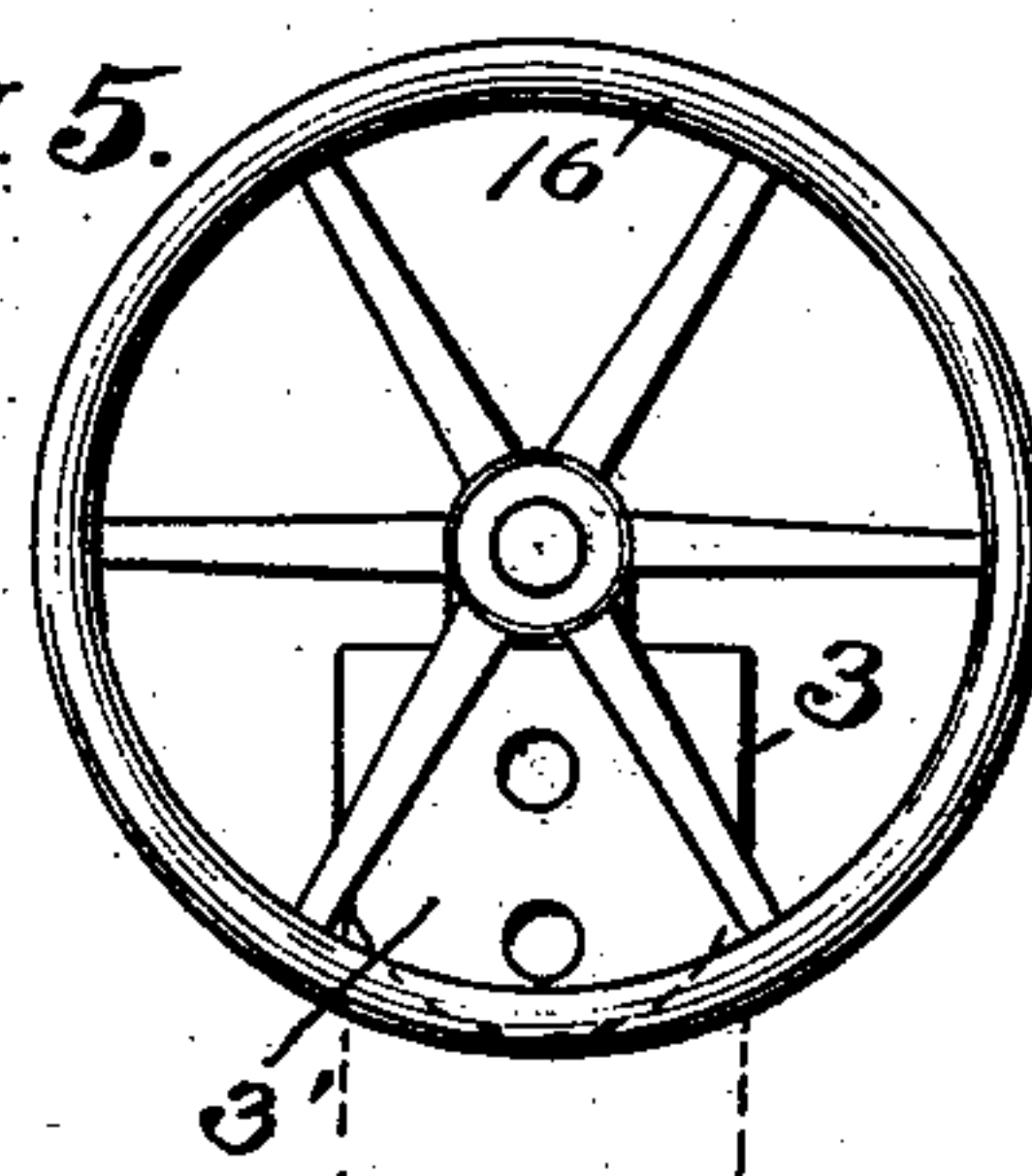


Fig. 6.

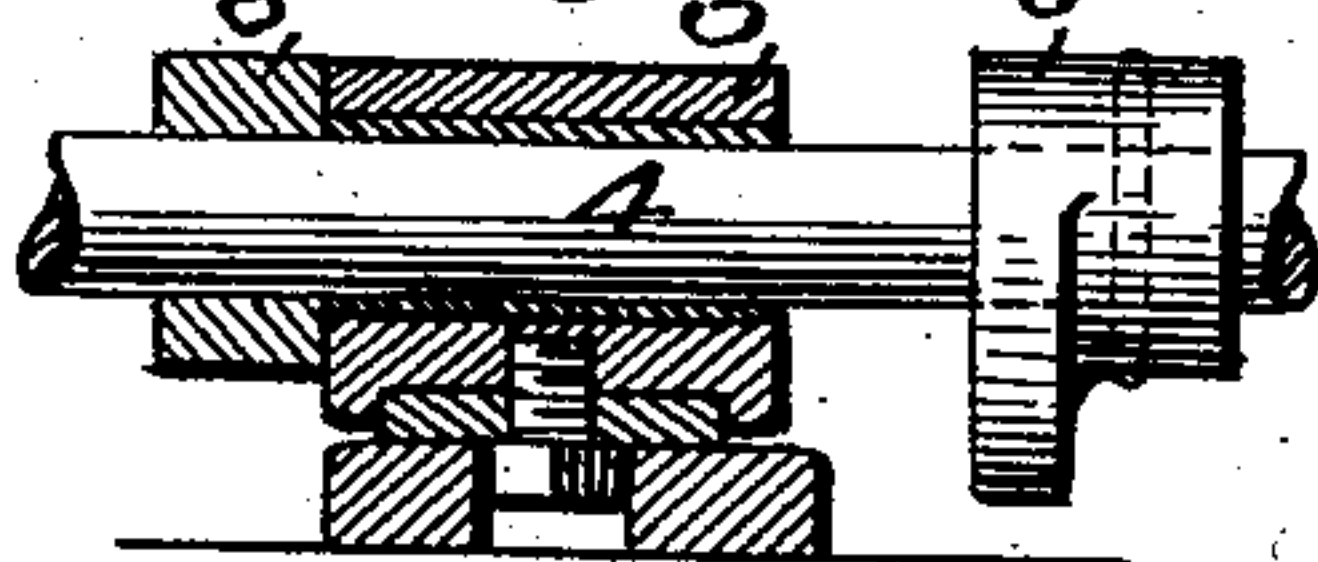


Fig. 7.

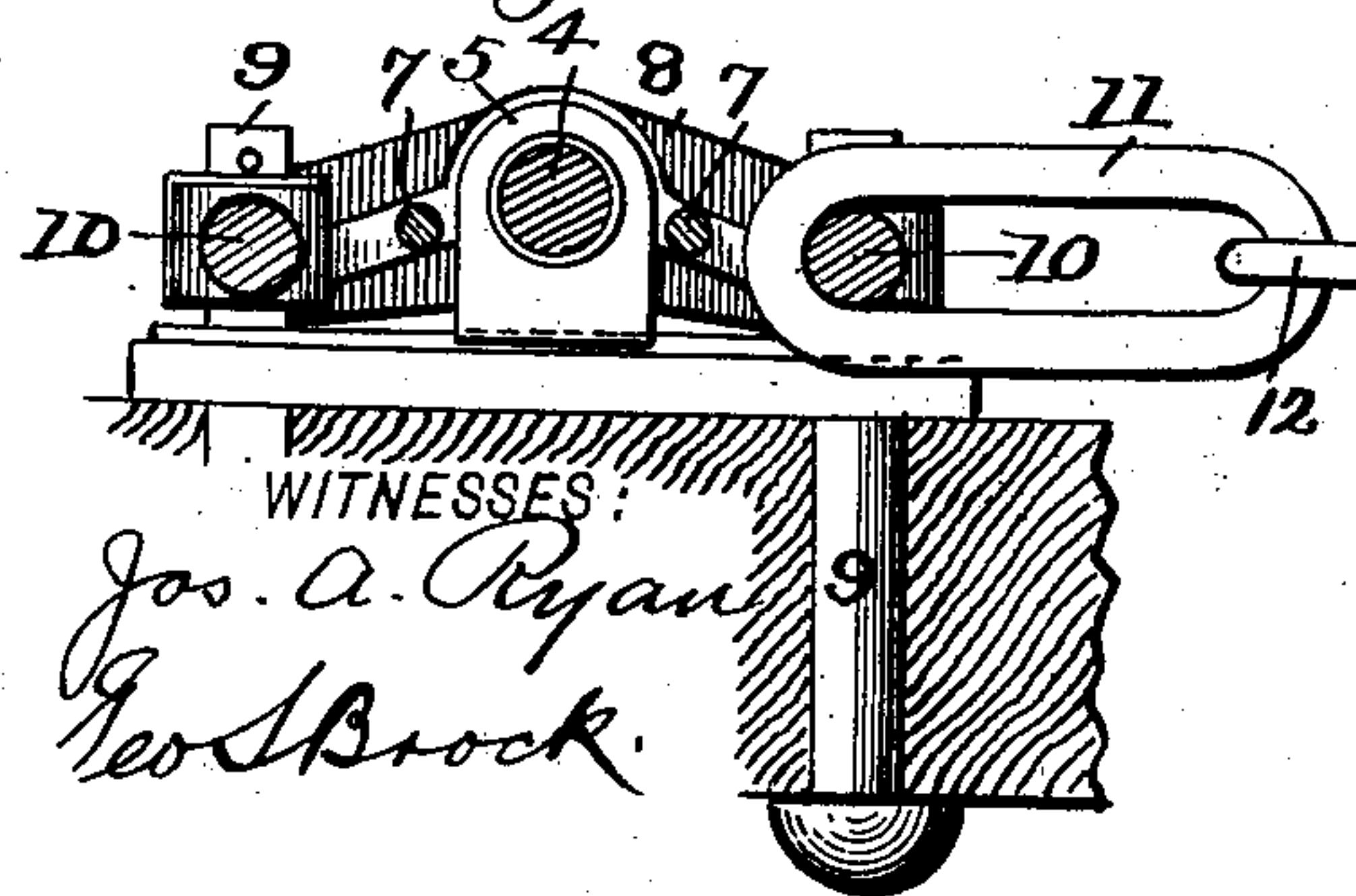
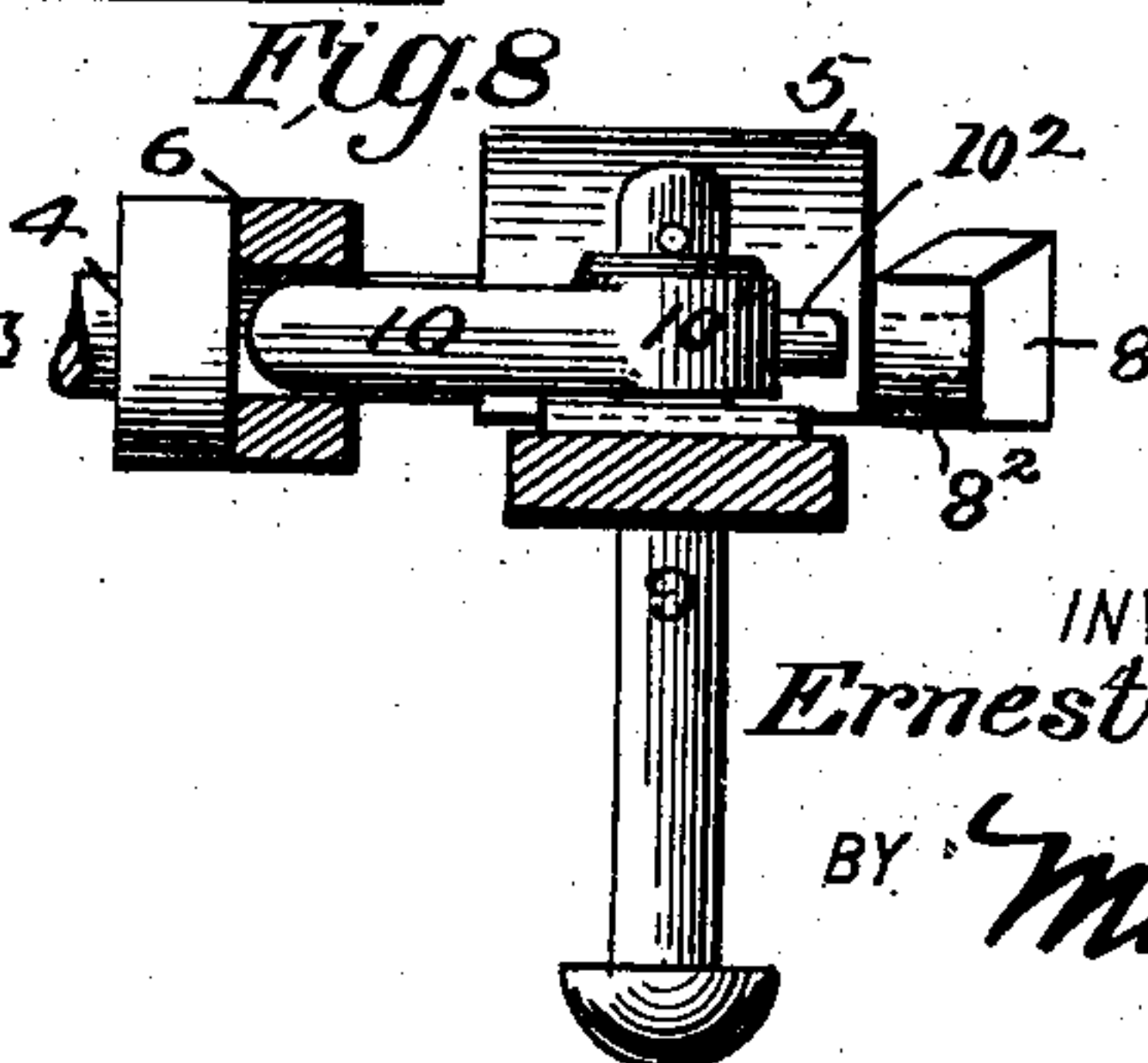


Fig. 8.



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ERNEST WALTER SPENCER, OF PORTLAND, OREGON.

LOG-RELEASING DEVICE FOR SCOWS.

SPECIFICATION forming part of Letters Patent No. 705,465, dated July 22, 1902.

Application filed February 24, 1902. Serial No. 95,264. (No model.)

To all whom it may concern:

Be it known that I, ERNEST WALTER SPENCER, of Portland, in the county of Multnomah and State of Oregon, have invented a new and useful Improvement in Log-Releasing Devices for Scows, of which the following is a specification.

My invention relates to an improvement in log-releasing devices for scows, &c., and has for its object to release chock-blocks or timbers slidably mounted on the outer ends of inclined trusses secured to the deck of a scow, whereby logs held on said trusses by the chock-blocks or timbers are permitted to roll down said trusses and off the scow onto a wharf or other receiving agent.

To these ends my invention consists of the peculiar construction, arrangement, and combination of parts, as will be hereinafter fully described and claimed, and pointed out in the drawings, in which—

Figure 1 is a top plan view showing the device secured on the deck of a scow. Fig. 2 is an end elevation, partly broken away, as in use. Fig. 3 is a detail plan view of the locking and unlocking mechanism. Fig. 4 is a detail section of the hand-wheel and its bearing. Fig. 5 is an elevation of the wheel. Fig. 6 is a detail section on line *x x* of Fig. 3. Fig. 7 is a section on line *y y* of Fig. 3. Fig. 8 is a detail side view of the swinging bolt.

1 represents a scow to the deck of which are secured at suitable intervals the double trusses 2, having their apices at the longitudinal center of the scow and inclined downwardly to each side, where they rest on and are secured to the scow, the said trusses being held in their elevated position at the center by the timbers 2' 2' and 2².

At each end of the scow a casting or bracket 3 is secured by bolts 3^x or other suitable means passing through the flanges 3' and 3² into the scow, and said brackets are provided with a longitudinal bore 3^a for the reception and bearing of a longitudinal shaft 4, which extends the entire length of the scow and projects through said brackets 3, being screw-threaded at its outer ends. The said shaft 4 also passes through a number of bearing-blocks 5, placed at suitable intervals along the deck and secured thereto.

Secured to the shaft 4 at suitable intervals and generally adjacent to one of the bearings 5 is a keeper or casting 6 of substantially the shape shown.

The keepers or castings 6 are provided with transverse horizontal arms 6' 6', having holes or openings 6² 6² near each end, and are also provided with the longitudinal pins 7 7, which extend on each side of the shaft 4 and parallel therewith. These pins are secured to the keeper or casting 6 by screwing into them or in any other suitable manner.

Loosely and slidably mounted on the shaft 4 at a distance from each keeper or casting 6 about equal to the length of the pins 7 7 is an auxiliary keeper or casting 8, provided with transverse horizontal arms 8' 8', said arms having near their outer ends openings or holes 8² 8², the purpose of which will presently appear.

Secured in the deck of the scow and projecting upwardly therefrom between the transverse arms of the keepers or castings 6 and the auxiliary keepers 8 are the pins or bolts 9. Mounted on these pins or bolts are horizontal swinging bolts 10, which when in their normal position are in alinement with the openings 6² and 8² in the arms of the keepers or castings 6 and 8. These swinging bolts are held on the pins 9 by a cotter-pin passed therethrough or by any other suitable means.

The swinging bolts 10 consist of the bolt portion proper, 10, the hub 10', and the projection or boss 10².

11 represents chain-links, to which are spliced wire ropes 12, which links are adapted to encircle the swinging bolts 10. The wire ropes pass through stops or eyebolts 13, secured to the deck and designed to limit the movement of links 11. The outer end of the wire ropes are pivotally secured to chock-blocks or timbers 14 by means of the eyes 14'. Secured to the sides of the scow just below the upper edge thereof are the ledges or shelves 15, the purpose of which will be described farther on.

The shaft 4, as stated, is screw-threaded at each end, and threaded on each end is a hand-wheel 16, having an inwardly-projecting hub-section 16', the face of which is adapted to

bear against the face of the bracket or bearing and the bore of which is screw-threaded to fit the threads on end of shaft 4.

In Fig. 3 the parts are shown as locked. Now, presuming the scow to be loaded, if it is desired to release the logs held on the double-inclined trusses by the chock-blocks or timbers 14, the hand-wheel on the left-hand end of the shaft is screwed up to the bracket 3 and draws the shaft outwardly through said bracket. The castings 6, being secured to the shaft 4, move with it and draw the arms 6' with it until the ends of swinging bolts 10 are free of the arms 6' and holes 6², when the weight of the logs against the chock-blocks or timbers 14, through the agency of wire ropes, causes the links 11 to pull on the swinging bolts 10 and cause them to swing clear of the castings 6. The links then move outwardly until their movement is arrested by the stops, they being too large to pass through the same. This outward movement of the links and wire ropes allows the chock-blocks or timbers to move down the incline of the truss until they reach the side of the scow, where they turn over the same and drop onto the ledge or shelf 15 and form a continuation of the inclined trusses 2.

The chock-blocks or timbers are preferably formed of longitudinal timbers running fore and aft the entire length of the scow, their under faces being properly beveled to allow them to rest firmly on the inclined trusses and project diagonally upwardly at a slight angle from the vertical.

When the keepers 6 are in the position shown in Fig. 3, the two pins 7 7 prevent the auxiliary keepers or castings 8, which slide loosely on the shaft 4, from engaging with the projection or boss 10² of the swinging bolt 10; but when the longitudinal movement of shaft withdraws the keeper 6 the auxiliary keepers or castings 8 can be moved by hand into the position shown in dotted lines in Fig. 3 and in this position will hold the swinging bolts 10 parallel to each other and to the shaft 4, so that they will enter the holes 6² in the keepers 6, when they are moved back again by the longitudinal movement of the shaft, which is of great importance, as a number of keepers have to be so entered and locked at the same time, the links 11, which are spliced to the inboard end of the wire ropes 12, having been put over the swinging bolts 10, while the auxiliary keepers 8 hold the swinging bolts in parallel position. Now when the keepers 6 are moved into position to lock the swinging bolts 10, which hold the ropes, the auxiliary keeper is moved away from the opposite end of the swinging bolts by the pins 7 7. The said keepers 6 will sustain part of the load until withdrawn, when the links 11, being connected to and a part of the wire ropes 12, follow them until stopped by the eyebolts or stops 13, so placed that the chock-blocks or timbers are

held at the position shown by dotted lines in Fig. 2.

The links 11 must be sufficiently long to permit the ends of the swinging bolts to swing clear of the eyes of the ropes.

The bearing-blocks 5 keep shaft in its central position and the various parts in their proper relative position.

I have described the construction of only one set of locking and unlocking devices, as they are all alike in construction and operation; but it is to be understood that a number of the releasing and locking devices are to be used and placed along the deck and operates simultaneously in order that the strain may be equalized.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a device for unloading logs, a suitable base, inclined trusses mounted on said base, chock-blocks movably held on and adjacent to the outer end of said trusses, cables or equivalent means secured at one end to the chock-blocks and detachably held at the other end to releasing mechanism, and means for operating said releasing mechanism.

2. In a device for unloading logs, a suitable base transverse double - inclined trusses mounted on said base, a longitudinal shaft mounted on said base, chock-blocks movably held on said trusses adjacent to ends thereof, and intermediate releasing mechanism between the shaft and the chock-blocks.

3. In a device for unloading logs, the combination with a base, of inclined log-supports, chock-blocks movably held adjacent to the ends of said log-support, a longitudinal shaft mounted on the said base, releasing mechanism secured to said shaft, cables or equivalent means connected to said chock-blocks and to said releasing mechanism, and means for longitudinally moving said shaft whereby the releasing mechanism is unlocked, to release the cable and allow the chock-blocks to move over and beyond the ends of the inclined log-supports.

4. In a device for unloading logs, the combination with a base, of inclined log-supports or trusses, a longitudinal shaft suitably mounted on said base, and screw-threaded at its ends, keepers secured to the said shaft, pivoted bolts secured to the base, chock-blocks movably held on and adjacent to the ends of the inclined trusses, cables or equivalent means secured to the chock-blocks at one end and engaging the pivoted bolts at the other end, and an internally-threaded hand wheel or nut mounted on the threaded ends of the shaft and adapted to have a bearing against the base, whereby when the said hand wheel or nut is rotated the shaft is longitudinally moved carrying the keeper out of locking engagement with the said swinging bolts, releasing the cable and allowing the chock-blocks to be moved outwardly over the

ends of the inclined log-supports or trusses by the weight of the logs bearing against the said chock-blocks.

5. In a device for unloading logs, the combination with a suitable base, of inclined trusses, a longitudinal shaft held in bearings on said base and in said base, and threaded at each end, main keepers having openings therein and secured to said shaft, auxiliary keepers loosely mounted on said shaft and provided with holes, pivoted bolts secured to the base between the said main keepers and auxiliary keepers, a projection or boss on the end of said bolt adjacent to the auxiliary keeper, and in alinement with main portion of the said bolts, the said projection or bossing adapted to engage the opening in the auxiliary keepers, chock-blocks movably held on and adjacent to the ends of the inclined trusses, cables or equivalent means pivotally secured at one end to the chock-blocks, and at the other end engaging loosely with the pivoted bolt, hand wheels or nuts engaging the threaded ends of the shaft and adapted to have a face bearing against the end bearings supporting the shaft, whereby when the said hand-wheels are screwed up against the end shaft-bearings, the shaft is caused to be moved longitudinally and carry the main keepers out of engagement with the pivoted bolts permitting them to swing and release one end of the cable and allow the chock-blocks to be moved outwardly over the ends of the inclined trusses by the weight of the logs against them.

6. In a device for unloading logs, the combination of a base, double-inclined trusses mounted thereon, a longitudinal shaft, suitably mounted on said base, and threaded at each end, bearings secured at each end of said base and supporting said shaft, main keepers secured to the shaft at suitable intervals having side extensions provided with openings, longitudinal pins secured to said main keepers between the shaft and the openings in said

main keepers, auxiliary keepers mounted to slide on said shaft and separated from the main keepers by the pins secured to said main keepers, and having side extensions provided with holes in alinement with the holes of the main keepers, bolts pivotally secured to the base opposite the holes in the main and auxiliary keepers, and consisting of a main portion and a projection or boss, chock-blocks movably mounted on and adjacent to the ends of the inclined trusses, cables or equivalent means pivotally secured at one end to the chock-blocks and provided with an eye at the other end adapted to engage the pivoted bolts, a stop interposed between the ends of the cable through which said cable is adapted to pass, and internally-threaded hand wheels or nuts engaging the threaded ends of the shaft, having a face bearing against the end shaft-bearings, whereby when the said hand-wheels are alternately screwed up against the said end bearings the shaft is caused to move longitudinally and cause the main keepers to release or lock all of the pivoted bolts simultaneously.

7. In a device for unloading logs, a suitable base, inclined trusses mounted on said base, chock-blocks movably held on and adjacent to the outer end of said trusses, cables, or equivalent means pivotally secured at one end to the chock-blocks, and detachably held at the other end to releasing mechanism, means for operating the releasing mechanism, and a ledge or shelf secured to the sides of the base below the lower end of the inclined trusses, whereby when the chock-blocks are released and turn over the ends of the trusses they rest upon the said ledges or shelves and form a continuation of the said inclined trusses.

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Witnesses:

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